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ART UNIT	PAPER NUMBER
2181	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/345,809	Applicant(s) CHRISTENSEN ET AL.	
	Examiner Christopher E. Lee	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-26 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 02 July 1999 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to because there is not a cross-hatched box in Fig. 4 (See page 14, lines 10-12). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In the claim 20, the limitation "to automatically send the list of backup link active devices to the backup link active scheduler" in lines 3-4 is a subject matter which is not provided by a proper antecedent basis for the claimed subject matter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art [hereinafter AAPA] in view of McLaughlin [EP 0 460 308 A1; cited by the Applicant].

Referring to claim 1, AAPA discloses a method of providing a backup link active schedule (See page 3, lines 5-9) for use in controlling communication (See page 2, lines 19-25) in a process control system (See page 3, line 3) having a master link active scheduler (See page 2, line 26) and a backup link active scheduler (See page 2, lines 27-28) communicatively coupled together via a databus (i.e., open

protocol bus; See page 2, lines 7-12), comprising the steps of: storing (i.e., downloading) a link active schedule in a master link active scheduler (i.e., master LAS; See page 3, lines 3-4); and storing (i.e., downloading) said link active schedule in said backup link active scheduler (i.e., backup LAS; See page 3, lines 5-9).

AAPA does not disclose expressly the steps of automatically transmitting said link active schedule from said master link active scheduler over said databus to said backup link active scheduler upon receipt of said link active schedule in said master link active scheduler.

McLaughlin discloses methods for control data base updating of a redundant processor in a process control system, comprising the steps of: a link active schedule (data base 32 of Fig. 1) in a master link active scheduler (primary controller 30 of Fig. 1) automatically transmitting (i.e., transferring; See col. 2, lines 9-25) said link active schedule (i.e., data base) from said master link active scheduler (i.e., primary controller) over a databus (i.e., three mediums, data highway 12, link 13, I/O link in Fig. 1; See col. 8, lines 22-36) to a backup link active scheduler (secondary controller 40 of Fig. 1) upon receipt of said link active schedule (viz., upon update of said data base) in said master link active scheduler (i.e., in said primary controller; See col. 7, lines 46-51 and Fig. 5); and storing (i.e., updating) said link active schedule (i.e., data base) in said backup link active scheduler (i.e., in said secondary controller; See col. 1, line 54 through col. 2, line 25). AAPA and McLaughlin are analogous art because they are from a similar problem solving area, viz., process control system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said automatic transmission step (i.e., data transferring for updating said secondary controller's data base), as disclosed by McLaughlin, in said method of providing a backup link active schedule, as disclosed by AAPA, for the advantage of providing a data consistency among said link active schedules (i.e., data base in McLaughlin), thereby, when a failover condition occurs, said time to get said backup link active scheduler (i.e., secondary controller; McLaughlin) to take over for said failed master

link active scheduler (i.e., primary controller; McLaughlin) is substantially reduced as well as being less of an impact to said process under control (See col. 1, lines 3-6 and 43-47; McLaughlin).

Referring to claims 5 and 6, AAPA discloses the step of automatically transmitting includes the step of transmitting using an open communication protocol (viz., standard communication protocol, like Fieldbus protocol), which is a Fieldbus communication protocol (See page 2, lines 7-18).

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of McLaughlin [EP 0 460 308 A1] as applied to claims 1, 5 and 6 above, and further in view of Chrabaszcz [US 6,263,387 B1].

Referring to claim 2, AAPA, as modified by McLaughlin, discloses all the limitations of claim 2 except that does not teach the step of storing a list of backup link active scheduler devices associated with said databus in said master link active scheduler.

Chrabaszcz discloses a system for automatically configuring a server, wherein the step of storing (i.e., detecting and keeping;) a list (i.e., a configuration database) of backup link active scheduler devices (i.e., all circuit boards) associated with a databus (i.e., on the PCI bus) in a master link active scheduler (i.e., kept by the Hot Plug software).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said storing said list, as disclosed by Chrabaszcz, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin, for the advantage of providing an automatic listing of said backup link active schedulers (i.e., circuit boards on the PCI bus) by said Hot Plug software.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of McLaughlin [EP 0 460 308 A1] as applied to claims 1, 5 and 6 above, and further in view of Burns et al. [WO 98/14853; hereinafter Burns; cited by the Applicant] and Shapiro et al. [US 6,230,286 B1; hereinafter Shapiro].

Referring to claim 3, AAPA, as modified by McLaughlin, discloses all the limitations of claim 3 except that does not teach the steps of detecting when said backup link active scheduler is unavailable for storage of said link active schedule and notifying a user that said backup link active scheduler is unavailable for storage of said link active schedule.

Burns discloses a process control network 10 (Fig. 1), the step of detecting when a backup link active scheduler (i.e., field device) is unavailable for storage of a link active schedule (See page 23, lines 20-23; i.e., wherein in fact that a field device does not properly response to pass token messages on a databus implies said field device (i.e., backup link active scheduler) is unavailable for storage of a link active schedule on said databus).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said detection, as disclosed by Burns, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin, for the advantage of providing a capability of an immediate service to take over for failed master link active scheduler thanks to maintaining said availability information of said backup link active scheduler when a failover condition occurs.

AAPA, as modified by McLaughlin and Burns, does not disclose the step of notifying a user that said backup link active scheduler is unavailable for storage of said link active schedule.

Shapiro discloses a computer system failure reporting mechanism, wherein the step of notifying (i.e., sending a report; See abstract) a user (i.e., a user at a remote site) a failure (i.e., said backup link active scheduler is no longer communicating on said databus; See the rejection of the specific limitations of the claim 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said sending a report, as disclosed by Shapiro, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin and Burns, for the

advantage of providing a flexibility of said user notification with a notifying option, like said user is able to specify with some particularity under what circumstances a report should be generated (See col. 2, lines 40-43; Shapiro).

Referring to claim 4, AAPA, as modified by McLaughlin, discloses all the limitations of claim 4 except that does not teach the steps of detecting a failure to store said link active schedule in at least one backup link active scheduler and notifying a user of said detected failure to store said link active schedule in at least one backup link active scheduler.

Burns discloses a process control network 10 (Fig. 1), the steps of detecting a failure to store a link active schedule in at least one backup link active scheduler (i.e., detecting when said backup link active scheduler is unavailable for storage (i.e., failure to store) of a link active schedule).

Refer to page 23, lines 20-23 (i.e., wherein in fact that a field device does not properly response to pass token messages on a databus implies said field device (i.e., backup link active scheduler) is failed to store a link active schedule on said databus).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said detection, as disclosed by Burns, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin, for the advantage of providing a capability of an immediate service to take over for failed master link active scheduler thanks to maintaining said availability information of said backup link active scheduler when a failover condition occurs.

AAPA, as modified by McLaughlin and Burns, does not disclose the step of notifying a user of said detected failure to store said link active schedule in at least one backup link active scheduler.

Shapiro discloses a computer system failure reporting mechanism, wherein the step of notifying (i.e., sending a report; See abstract) a user (i.e., a user at a remote site) a failure (i.e., said backup link active scheduler is unavailable for storage of said link active schedule).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said sending a report, as disclosed by Shapiro, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin and Burns, for the advantage of providing a flexibility of said user notification with a notifying option, like said user is able to specify with some particularity under what circumstances a report should be generated (See col. 2, lines 40-43; Shapiro).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of McLaughlin [EP 0 460 308 A1] as applied to claims 1, 5 and 6 above, and further in view of Burns [WO 98/14853].

Referring to claim 7, AAPA, as modified by McLaughlin, discloses all the limitations of claim 7 except that does not teach the step of recognizing that said backup link active scheduler is no longer communicating on said databus.

Burns discloses a process control network 10 (Fig. 1), the step of recognizing that a backup link active scheduler (i.e., field device) is no longer communicating on a databus (See page 23, lines 20-23; i.e., wherein in fact that a field device does not properly response to pass token messages on a databus implies said field device (i.e., backup link active scheduler) is no longer communicating on said databus).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said recognition, as disclosed by Burns, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin, for the advantage of providing a capability of an immediate service to take over for failed master link active scheduler thanks to maintaining said availability information of said backup link active scheduler when a failover condition occurs.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of McLaughlin [EP 0 460 308 A1] and Burns [WO 98/14853] as applied to claim 7 above, and further in view of Chrabaszcz [US 6,263,387 B1].

Referring to claim 8, AAPA, as modified by McLaughlin and Burns, discloses all the limitations of claim 8 except that does not teach the step of recognizing includes said step of comparing a live list to a backup list.

Chrabaszcz discloses a system for automatically configuring a server, wherein the step of recognizing includes the step of comparing a live list (i.e., devices identified are placed in a list; See col. 10, lines 56-59) to a backup list (i.e., against a configuration database; See col. 10, line 60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said comparing, as disclosed by Chrabaszcz, in the step of said recognizing, as disclosed by AAPA in view of McLaughlin and Burns, for the advantage of providing an automatic adjustment (i.e., reconfiguration) of said backup list (i.e., configuration data base; Chrabaszcz) for said backup link active schedulers (i.e., circuit boards on the PCI bus; Chrabaszcz). Refer to col. 10, lines 51-67 in Chrabaszcz.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of McLaughlin [EP 0 460 308 A1] and Burns [WO 98/14853] as applied to claim 7 above, and further in view of Shapiro [US 6,230,286 B1].

Referring to claim 9, AAPA, as modified by McLaughlin and Burns, discloses all the limitations of claim 9 except that does not teach the step of notifying a user that said backup link active scheduler is no longer communicating on said databus.

Shapiro discloses a computer system failure reporting mechanism, wherein the step of notifying (i.e., sending a report; See abstract) a user (i.e., a user at a remote site) a failure (i.e., said backup link active

scheduler is no longer communicating on said databus; See the rejection of the specific limitations of the claim 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said sending a report, as disclosed by Shapiro, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin and Burns, for the advantage of providing a flexibility of said user notification with a notifying option, like said user is able to specify with some particularity under what circumstances a report should be generated (See col. 2, lines 40-43; Shapiro).

10. Claims 10, 14-19, 21, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns [WO 98/14853] in view of McLaughlin [EP 0 460 308 A1].

Referring to claim 10, Burns discloses a system (process control network 10 of Fig. 1) for controlling communications (See page 3, lines 20-24) on a databus (bus 34 of Fig. 1) using a link active schedule (See page 18, lines 18+), comprising: a master link active scheduler (LAS 12, 16 and 26 in Fig. 1; See page 18, lines 19-26) having a memory (RAM 1146, ROM 1148 and 1150 NVRAM in Fig. 14) that stores a link active schedule (See page 18, lines 22-26) and a processor (microprocessor 1140 of Fig. 14); and a backup link active scheduler (Link Master 22 of Fig. 1; i.e., backup LAS; See page 18, lines 26-30) in communication via said databus with said master link active scheduler (See bus 34 and LAS 12, 26, 16 and Link Master 22 in Fig. 1).

Burns does not disclose expressly said processor programmed to automatically transmit said link active schedule over said databus upon receiving said link active schedule. Burns and McLaughlin are analogous art because they are from a similar problem solving area, viz., process control system.

McLaughlin discloses a process control system, wherein a processor (primary processor 31 of Fig. 1) programmed to automatically transmit (i.e., transferring; See col. 2, lines 9-25) said link active schedule

(i.e., data base) over a databus (i.e., three mediums, data highway 12, link 13, I/O link in Fig. 1; See col. 8, lines 22-36) upon receiving said link active schedule (viz., upon update of said data base).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have programmed said automatic transmission routine (i.e., data transferring for updating said secondary controller's data base), as disclosed by McLaughlin, in said processor, as disclosed by Burns, for the advantage of providing a data consistency among said link active schedules (i.e., data base in McLaughlin), thereby, when a failover condition occurs, said time to get said backup link active scheduler (i.e., secondary controller; McLaughlin) to take over for said failed master link active scheduler (i.e., primary controller; McLaughlin) is substantially reduced as well as being less of an impact to said process under control (See col. 1, lines 3-6 and 43-47; McLaughlin).

Burns, as modified by McLaughlin, teaches said backup link active scheduler (i.e., secondary controller in McLaughlin) receiving (i.e., transferred and updating; McLaughlin) said link active schedule (i.e., data base; McLaughlin) transmitted from said master link active scheduler (i.e., primary controller; McLaughlin). Refer to page 2, lines 17-21 in McLaughlin.

Referring to claims 14 and 15, Burns discloses said master link active scheduler and said backup link active scheduler are each adapted to transmit over said databus using an open protocol (viz., standard protocol, like Fieldbus protocol), which is the Fieldbus protocol (See page 12, lines 15-17).

Referring to claim 16, Burns discloses said backup link active scheduler is a field device (Link Master 22 of Fig. 1 and See page 8, line 20).

Referring to claim 17, Burns discloses a system (process control network 10 of Fig. 1) for controlling a process (See page 1, lines 8-10), comprising: a user interface (host 12 of Fig. 1) coupled to a first databus (bus segment 34a of Fig. 1); a controller (controller 14 of Fig. 1) communicatively coupled to said user interface through said first databus (See page 8, line 27 through page 9, line 5); an I/O device (bridge 32 of Fig. 1) coupled to said controller and further coupled to a second databus (bus segment 34b

of Fig. 1); a plurality of field devices (basic device 18 and 19, link master 16 and 22 in Fig. 1) coupled to said second databus, each of said field devices adapted to communicate with said I/O device over said second databus (See page 10, lines 9-11); a primary scheduler (Link master (LAS) 16 of Fig. 1) coupled to said second databus and adapted to use a link active schedule to control interoperation of said field devices (See page 18, lines 19-26); a backup scheduler (Link Master 22 of Fig. 1; i.e., backup LAS) coupled to said second databus and adapted to communicate with said primary scheduler and said plurality of field devices via said second databus (See Fig. 1 and page 18, lines 26-30); and a processor (microprocessor 1140 of Fig. 14) associated with said primary scheduler (field device controller 1102 of Fig. 14).

Burns does not disclose expressly said processor programmed to automatically store a backup copy of said link active schedule in said backup scheduler upon receiving said link active schedule.

McLaughlin discloses a process control system, wherein a processor (primary processor 31 of Fig. 1) programmed to automatically store a backup copy (i.e., update data bases for a data consistency among controllers') of a link active schedule (i.e., data base) in a backup scheduler (i.e., secondary controller) upon receiving a link active schedule (viz., upon update of said data base).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have programmed said automatic transmission routine (i.e., data transferring for updating said secondary controller's data base), as disclosed by McLaughlin, in said processor, as disclosed by Burns, for the advantage of providing a data consistency among said link active schedules (i.e., data base in McLaughlin), thereby, when a failover condition occurs, said time to get said backup link active scheduler (i.e., secondary controller; McLaughlin) to take over for said failed master link active scheduler (i.e., primary controller; McLaughlin) is substantially reduced as well as being less of an impact to said process under control (See col. 1, lines 3-6 and 43-47; McLaughlin).

Referring to claim 18, Burns discloses said second databus uses a Fieldbus communication protocol (See claims 16 and 19 on pages 41-42).

Referring to claim 19, Burns discloses a communication scheduling system (process control network 10 of Fig. 1) for use in a process control system (See page 1, lines 8-10) having a master link active scheduler (Link master (LAS) 16 of Fig. 1) with a processor therein (microprocessor 1140 of Fig. 14) and a backup link active scheduler (Link Master 22 of Fig. 1; i.e., backup LAS) communicatively coupled to a databus (bus segment 34b of Fig. 1; See page 10, lines 9-11), comprising: a computer readable memory (RAM 1146, ROM 1148 and 1150 NVRAM in Fig. 14).

Burns does not disclose expressly a first storing routine stored on said memory and adapted to be executed by said processor that stores a link active schedule in said master link active scheduler; and an automatic transmission routine stored on said memory and adapted to be executed by said processor that automatically transmits said received link active schedule from said master link active scheduler over said databus to said backup link active scheduler upon receipt of said link active schedule in said master link active scheduler.

McLaughlin discloses a process control system, wherein a processor (primary processor 31 of Fig. 1) programmed to a first storing routine (i.e., means for updating primary controller's data base; See col. 2, lines 2-3) stored on said memory (i.e., said primary controller performing said first storing routine, which should be located said in said memory of said primary controller) and adapted to be executed (i.e., performed) by said processor that stores a link active schedule (i.e., data base) in said master link active scheduler (See col. 2, lines 5-14); and an automatic transmission routine (i.e., transferring updating information, thereby updating secondary controller's data base) stored on said memory (i.e., said primary controller performing said transferring routine, which should be located in said memory of said primary controller; See col. 2, lines 15-17) and adapted to be executed by said processor that automatically transmits said received link active schedule (i.e., updated data base information) from said master link

active scheduler (i.e., primary controller) over a databus (i.e., three mediums, data highway 12, link 13, I/O link in Fig. 1; See col. 8, lines 22-36) to said backup link active scheduler (i.e., secondary controller; viz., update data bases for a data consistency among controllers') upon receipt of said link active schedule (viz., upon update of said data base) in said master link active scheduler (See col. 2, lines 15-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have programmed said storing and automatic transmission routines (i.e., updating said data base of said primary controller and transferring it to said secondary controller for updating said data base of secondary controller), as disclosed by McLaughlin, in said processor, as disclosed by Burns, for the advantage of providing a data consistency among said link active schedules (i.e., data base in McLaughlin), thereby, when a failover condition occurs, said time to get said backup link active scheduler (i.e., secondary controller; McLaughlin) to take over for said failed master link active scheduler (i.e., primary controller; McLaughlin) is substantially reduced as well as being less of an impact to said process under control (See col. 1, lines 3-6 and 43-47; McLaughlin).

Referring to claim 21, Burns discloses a process control network 10 (Fig. 1), a detecting routine stored on said memory and adapted to be executed by said processor that detects when said backup link active scheduler (i.e., field device) is unavailable for storage of said link active schedule (See page 23, lines 20-23; i.e., wherein in fact that a field device does not properly response to pass token messages on a databus implies said field device (i.e., backup link active scheduler) is unavailable for storage of a link active schedule on said databus).

Referring to claim 23, Burns discloses a process control network 10 (Fig. 1), a detecting routine stored on said memory and adapted to be executed by said processor that detects a failure to store said link active schedule in said backup link active scheduler (i.e., detecting when said backup link active scheduler is unavailable for storage (i.e., failure to store) of a link active schedule). Refer to page 23, lines 20-23 (i.e., wherein in fact that a field device does not properly response to pass token messages on a

databus implies said field device (i.e., backup link active scheduler) is failed to store a link active schedule on said databus).

Referring to claim 25, Burns discloses a detecting routine stored on said memory and adapted to be executed by said processor that detects when said backup link active scheduler (i.e., field device) is no longer communicating on said databus. (See page 23, lines 20-23; i.e., wherein in fact that a field device does not properly response to pass token messages on a databus implies said field device (i.e., backup link active scheduler) is no longer communicating on said databus).

11. Claims 11, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns [WO 98/14853] in view of McLaughlin [EP 0 460 308 A1] as applied to claims 10, 14-19, 21, 23 and 25 above, and further in view of Chrabaszcz [US 6,263,387 B1].

Referring to claim 11, Burns, as modified by McLaughlin, discloses all the limitations of claim 11 except that does not teach a list of backup link active scheduler devices stored in said memory. Chrabaszcz discloses a system for automatically configuring a server, wherein the step of storing (i.e., detecting and keeping;) a list (i.e., a configuration database) of backup link active scheduler devices (i.e., all circuit boards) stored in a memory (i.e., means for keeping said list by the Hot Plug software). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said storing said list, as disclosed by Chrabaszcz, in said method of providing a backup link active schedule, as disclosed by Burns in view of McLaughlin, for the advantage of providing an automatic listing of said backup link active schedulers (i.e., circuit boards on the PCI bus) by said Hot Plug software.

Referring to claim 12, Chrabaszcz discloses said processor further programmed to send (i.e., compare) said link active schedule (i.e., detected circuit board identification) to said backup link active scheduler devices (i.e., with configured circuit boards on PCI board) in said list (i.e., in configuration

database) of backup link active scheduler devices (i.e., means for checking of new circuit board on PCI bus is referring to said list of circuits boards (configuration database) for new circuit board configuration).

Referring to claim 20, Burns, as modified by McLaughlin, discloses all the limitations of claim 20 except that does not teach said automatic transmission routine is further adapted to receive and store a list of backup link active scheduler devices and to automatically send said list of backup link active scheduler devices to said backup link active scheduler.

Chrabaszcz discloses a system for automatically configuring a server, wherein said system comprises a list (i.e., configuration database) of backup link active scheduler devices (i.e., configured circuit boards on a PCI bus; See col. 10, lines 55-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further programmed said processor including said list (i.e., configuration database), as disclosed by Chrabaszcz, in said link active schedule of said communication scheduling system, as disclosed by Burns in view of McLaughlin, for the advantage of providing an automatic listing of said backup link active schedulers (i.e., circuit boards on the PCI bus) by said Hot Plug software.

Burns, as modified by McLaughlin and Chrabaszcz, discloses said automatic transmission routine is further adapted to receive and store said list of backup link active scheduler devices and to automatically send said list of backup link active scheduler devices to said backup link active scheduler.

12. Claims 13, 22, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns [WO 98/14853] in view of McLaughlin [EP 0 460 308 A1] as applied to claims 10, 14-19, 21, 23 and 25 above, and further in view of Shapiro [US 6,230,286 B1].

Referring to claim 13, Burns discloses said processor is further programmed to detect when said backup link active scheduler (i.e., field device) is unavailable for storage of said link active schedule (See page 23, lines 20-23; i.e., wherein in fact that a field device does not properly response to pass token

messages on a databus implies said field device (i.e., backup link active scheduler) is unavailable for storage of a link active schedule on said databus).

Burns, as modified by McLaughlin, discloses all the limitations of claim 13 except that does not teach said processor is further programmed to notify a user that said backup link active scheduler is unavailable for storage of said link active schedule.

Shapiro discloses a computer system failure reporting mechanism, wherein a processor (CPU in Fig. 1) is programmed to notify (i.e., send a report; See abstract) a user (i.e., a user at a remote site) a failure (i.e., said backup link active scheduler is no longer communicating on said databus).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have programmed said sending a report, as disclosed by Shapiro, in said processor, as disclosed by Burns in view of McLaughlin, for the advantage of providing a flexibility of said user notification with a notifying option, like said user is able to specify with some particularity under what circumstances a report should be generated (See col. 2, lines 40-43; Shapiro).

Referring to claim 22, Burns, as modified by McLaughlin, discloses all the limitations of claim 22 except that does not teach a notifying routine stored on said memory and adapted to be executed by said processor that notifies a user when said backup link active scheduler is unavailable for storage of said link active schedule.

Shapiro discloses a computer system failure reporting mechanism, wherein a notifying routine stored on said memory and adapted to be executed by said processor that notifies (i.e., send a report; See abstract) a user (i.e., a user at a remote site) a failure (i.e., said backup link active scheduler is unavailable for storage of a link active schedule on said databus; See the rejection of the specific limitations of the claim 21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said sending a report, as disclosed by Shapiro, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin and Burns, for the

advantage of providing a flexibility of said user notification with a notifying option, like said user is able to specify with some particularity under what circumstances a report should be generated (See col. 2, lines 40-43; Shapiro).

Referring to claim 24, Burns, as modified by McLaughlin, discloses all the limitations of claim 24 except that does not teach a notifying routine stored on said memory and adapted to be executed by said processor that notifies a user of said failure to store said link active schedule in said backup link active scheduler.

Shapiro discloses a computer system failure reporting mechanism, wherein a notifying routine stored on said memory and adapted to be executed by said processor that notifies (i.e., send a report; See abstract) a user (i.e., a user at a remote site) a failure (i.e., said backup link active scheduler is failed to store said link active schedule in said backup link active scheduler; See the rejection of the specific limitations of the claim 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of said sending a report, as disclosed by Shapiro, in said method of providing a backup link active schedule, as disclosed by AAPA in view of McLaughlin and Burns, for the advantage of providing a flexibility of said user notification with a notifying option, like said user is able to specify with some particularity under what circumstances a report should be generated (See col. 2, lines 40-43; Shapiro).

Referring to claim 26, Burns, as modified by McLaughlin, discloses all the limitations of claim 26 except that does not teach a notifying routine stored on said memory and adapted to be executed by said processor that notifies a user that said backup link active scheduler is no longer communicating on said databus.

Shapiro discloses a computer system failure reporting mechanism, wherein a notifying routine stored on a memory and adapted to be executed by a processor that notifies a user (i.e., send a report; See abstract) a

user (i.e., a user at a remote site) a failure (i.e., said backup link active scheduler is no longer communicating on said databus; See the rejection of the specific limitations of the claim 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said notifying routine, as disclosed by Shapiro, in said communication scheduling system, as disclosed by Burns in view of McLaughlin, for the advantage of providing a flexibility of said user notification with a notifying option, like said user is able to specify with some particularity under what circumstances a report should be generated (See col. 2, lines 40-43; Shapiro).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Banerjee et al [US 5,426,774] disclose method for maintaining a sequence of events function during failover in a redundant multiple layer system.

Larson et al. [US 6,014,612] disclose remote diagnostics in a process control network having distributed control functions.

Glanzer et al. [US 6,424,872 B1] disclose block oriented control system.

Verssimo et al. [US 6,095,674] disclose windows based network configuration and control method for a digital control system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Lee whose telephone number is 703-305-5950. The examiner can normally be reached on 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter S. Wong can be reached on 703-305-3477. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3718 for regular communications and 703-746-9248 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Christopher E. Lee
Examiner
Art Unit 2181

cel/ CEL
September 23, 2002

SUMATI LEFKOWITZ
PRIMARY EXAMINER